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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,631	06/25/2003	Jong-Sung Jung	1349.1229	8988
21171	7590	10/26/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			NGUYEN, ANTHONY H	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/602,631	<b>Applicant(s)</b> JUNG, JONG-SUNG	
	<b>Examiner</b> Anthony H. Nguyen	<b>Art Unit</b> 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5,7-9,11,12 and 14-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-9,11,12 and 14-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/06/2005 (2 pgs)</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Claim Rejections - 35 U.S.C. § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 7-9, 11, 12 and 14-28 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Tung et al. (US 6,435,641) in view of Miyazaki (US 6,305,856).

With respect to claims 1 and 23-26, Tung et al. teaches a printer 10 having a paper edge sensing apparatus which includes a print head 303 mounted to a carrier 300, a first paper sensor 328, which detects a top edge and a bottom edge of a paper, which is mounted between the pickup unit 106 and the convey unit 308, 310 (Tung et al., col.5, the paragraphs 4 and 5), a paper sensor 330 mounted to the carrier at a predetermined distance from the print head and a controller 320 which controls the operation of the print head and paper print margin (Figs.4-5B, and col.5 the second paragraph). Tung et al. does not teach clearly the controller which controls the print head to control the print margin of top and bottom ends by comparing first top edge and first bottom edge signals and the right and left edges of a paper according to the left and right edge detection signals of the second paper sensor. Miyazaki teaches the controllers 30 and 106 for controlling the print margins according to the top, bottom, left and right edges detection signals from an interruptive sensor 28, a line sensor 29 and the side edge sensors 96, 97 (Miyazaki, Figs.1, 3, 7, 12, 15 and 16). In view of the

teaching of Miyazaki , it would have been obvious to one of ordinary skill in the art to modify the paper edge sensor apparatus of Tung et al. by providing the controller as taught by Miyazaki to permit more precise control of the print head to control the print margins on a paper.

With respect to claims 5, 17 and 18, the selection of a desired predetermined distance between the print margin and the edges of a paper involves only an obvious matter of desired printing format.

With respect to claims 9 and 27, Tung et al. teaches the steps of detecting a top edge using the paper sensor 330 and generating a print command when the top edge is detected (Fig.6A, steps 404-408) and an end command when the trailing edge is detected (Fig. 6B, steps 418 and 420).

With respect to claim 11, Tung et al. teaches the steps of detecting the top edge and begin counting a start printing time interval via the sensor 330 and the controller 320 (Tung et al., the paragraph bridging cols. 4 and 5).

With respect to claims 19, the step of tracking a position of a paper sensor while not specifically stated or shown in Tung et al. is necessary in a controller to providing an operative device.

With respect to claim 20, Fig.6H, step 508 of Tung et al. shows the printed sheet which is discharged to an output tray 16 from the printer.

### ***Response to Arguments***

Applicants' arguments filed on August 16, 2005 have been fully considered but they are not persuasive of any error in view of the new ground(s) of rejection(s).

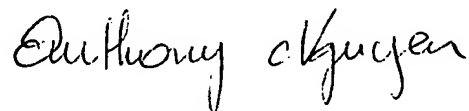
### **Conclusion**

The patents to Katsuma, Blanchard et al. and Knodt et al. are cited to show other structures and method having obvious similarities to the claimed structure and method.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Nguyen whose telephone number is (571) 272-2169. The examiner can normally be reached daily from 9 AM to 5PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld, can be reached on (571) 272-2168. The fax phone number for this Group is (571) 273-8300.



Anthony Nguyen  
10/21/05  
Patent Examiner  
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